



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

MEMORANDUM

SUBJECT: Data Release for PCB Aroclor Results from the Region 10 USEPA Laboratory

PROJECT NAME: Rainier Commons

PROJECT CODE: OOO-142A

FROM: Gerald Dodo, Supervisory Chemist
Office of Environmental Assessment
USEPA Region 10 Laboratory

TO: Bruce Long
Office of Compliance and Enforcement
USEPA Region 10

I have authorized release of this data package. Attached you will find the PCB Aroclor analysis results for the Rainier Commons samples collected on 9/1/09. This is the last of the data associated with this project. Contact me for further information regarding the attached data, 360-871-8728.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

**QUALITY ASSURANCE MEMORANDUM
FOR ORGANIC CHEMICAL ANALYSES**

Date: October 7, 2009

To: Bruce Long, Project Manager
Office of Compliance and Enforcement, USEPA Region 10

From: Steve Reimer, Chemist
Office of Environmental Assessment, USEPA Region 10 Laboratory

Subject: Quality Assurance Review for Rainier Commons
Project Code: OOO-142A
Account Code: 0910B10P201B53C

The following is a quality assurance review of the data for PCB Aroclor analysis of paint and solid samples from the Rainier Commons project. The analyses were performed by EPA chemists at the US EPA Region 10 Laboratory in Port Orchard, WA, following US EPA Laboratory guidelines.

This review covers the following samples:

09354100	09354101	09354102	09354103	09354104
09354105	09354106	09354107	09354108	09354109
09354110	09354111	09354112		

1. Data Qualifications

Comments below refer to the quality control specifications outlined in the Laboratory's current Quality Assurance Manual, Standard Operating Procedures (SOPs) and the Quality Assurance Project Plan (QAPP). No excursions were required from the method Standard Operating Procedure.

The quality control measures which did not meet Laboratory criteria are annotated in the title of each affected subsection with **"Laboratory/QAPP Criteria Not Met."**

For those tests for which the USEPA Region 10 Laboratory has been accredited by the National Environmental Laboratory Accreditation Conference (NELAC), all requirements of the current NELAC Standard have been met. The conclusions presented herein are based on the information provided for the review.

2. Sample Transport and Receipt

Upon sample receipt, no conditions were noted that would affect data quality.

3. Sample Holding Times

The concentration of an analyte in a sample or extract of a sample may increase or decrease over time depending on the nature of the analyte. For this reason, holding time limits are recommended for samples and extracts. Extracts were analyzed within 40 days of preparation. No qualifiers were applied based on holding times.

4. Sample Preparation

Paint samples were prepared according to the method outlined in USEPA Method 3580A and standard operating procedure (SOP) OR_C082 for PCB Aroclors in oil and wipes with a modification of tumbling the paint in dichloromethane and concentrated sulfuric acid prior to extraction. The solid sample was prepared according to draft SOP3570-M (shake extraction). No qualification of the data was required based on sample preparation.

5. Initial Calibration and Calibration Verification

The calibration functions generated for the initial calibration met method and SOP criteria. The Minimum Reporting Level (MRL) is the lowest point for which the calculated value tests within laboratory specified criteria. Calibration verification checks met criteria. No qualification was required based on calibration or calibration verification.

6. Laboratory Control Samples

Data for laboratory control samples/laboratory control sample duplicates (LCS/LCSD) are generated to provide information on the accuracy and precision of the analytical method and the laboratory performance. The LCS/LCSD recoveries were within criteria.

7. Blank Analysis

Method blanks were analyzed with the sample preparation batch to evaluate the potential for laboratory contamination and effects on the sample results. PCB Aroclors were not detected above the reporting limit in the blanks.

8. Surrogate Spikes

Surrogate recoveries are used to help in the evaluation of laboratory performance on individual samples. The surrogate recoveries met the criteria of 50-150% where an undiluted extract could be analyzed. For samples requiring high dilutions no surrogate recovery can be determined and "NA" is reported. No qualifiers were applied based on surrogate recoveries.

9. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed using samples 09354107 and 09354112 (S1/S2). PCB Aroclors 1016

and 1260 were spiked. The recoveries were within 50-150% with relative percent differences $\leq 40\%$ for 09354107. Sample 09354112 contained too much native Aroclor to allow determination of spike recoveries.

10. Compound Quantitation

The initial calibration functions were used for calculations. Reported quantitation limits were based on the initial calibration standards and sample size used for the analysis.

Samples 09354110 and 09354112 were extracted and analyzed in duplicate. The paint sample, 09354110, met the criterion for duplicate analysis. The solid sample, 09354112, had interspersed paint chips, resulting in high variability in the subsampling process. The reported results for the two are qualified as estimated, "J", due to this variability.

There are no numerical changes from the preliminary values provided earlier.

11. Identification

Aroclors detected in samples were judged to be acceptable with regard to chromatographic pattern matching with standards. All samples with detected Aroclors contained both 1254 and 1260. One sample, 09354109, had no detectable amounts of Aroclors but contained large amounts of DDT and Chlordane which resulted in an increased reporting limit. No attempt was made to quantify the pesticides.

12. Data Qualifiers

Below are the definitions for the codes used when qualifying data from these analyses. When more than one quality issue was involved, the most restrictive qualifier has been attached to the data.

Qualifier/ Remark Code	Definition (Codes Assigned to Values)
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U - The analyte was not detected at or above the reported value.

J - The identification of the analyte is acceptable; however the reported value is an estimate.

The usefulness of qualified data should be treated according to the severity of the qualifier in light of the project's data quality objectives. Should questions arise regarding the data, contact Steve Reimer at the Region 10 Laboratory, phone number (360) 871-8718.

13. Definitions

Accuracy - the degree of conformity of a measured or calculated quantity to its actual value.

Duplicate Analysis – when a duplicate of a sample (DS), a matrix spike (MSD), or a laboratory control sample (LCSD) is analyzed, it is possible to use the comparison of the results in terms of relative percent difference (RPD) to calculate precision.

Internal standards - Compounds used to help evaluate instrument analytical performance for individual samples. Internal

standards provide an instrument response for reference to accurately quantify the analytes for all associated instrumental analyses.

Laboratory Control Sample (LCS) - a clean matrix spiked with known quantities of analytes. The LCS is processed with samples through every step of preparation and analysis. Measuring percent recovery of each analyte in the LCS provides a measurement of accuracy for the analyte in the project samples. A laboratory control sample is prepared and analyzed at a frequency no fewer than one for every 20 project samples.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) - Sample analyses performed to provide information about the effect of the sample matrix on analyte recovery and measurement within the project samples. To create the MS/MSD, a project sample is spiked with known quantities of analyte(s) and the percent recovery of the analyte(s) is (are) determined.

Method Blank- An analytical control that is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background and reagent contamination. A method blank is prepared and analyzed for every batch of samples at a minimum frequency of one per every 20 samples. To produce unqualified data, the result of the method blank analysis is required to be less than the MRL and less than 5 times the amount of analyte found in any project sample.

Minimum Reporting Level (MRL) - the smallest measured concentration of a substance that can be reliably measured using a given analytical method.

Peak Integrations - The output of many analytical instruments is a peak which represents the quantity of analyte in the sample. The instrument automatically integrates the peak area to provide the concentration of the analyte; however, sometimes these peaks need to be manually integrated by the analyst.

Precision – the degree of mutual agreement or repeatability among a series of individual results.

Reference materials – Samples with analyte values that are homogeneous and well established. This allows the reference material to be used to assess the accuracy of the measurement method.

Relative Percent Difference – The difference between two sample results divided by their mean and expressed as a percentage.

Surrogate Spikes - usually isotopically labeled versions of analytes of concern or compounds not typically found in the environment. They are used to help evaluate laboratory preparation and analysis performance for individual samples. The surrogate spike differs from the LCS (above) in that it is placed in each project sample to assess preparation and analytical efficiency.

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 13

Collected: 9/1/09 **10:25:00**
Matrix: Solid
Sample Number: 09354100
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s): *2051243 Decachlorobiphenyl				NA
12674112	PCB-1016	46	mg/kg	U
11104282	PCB-1221	46	mg/kg	U
11141165	PCB-1232	92	mg/kg	U
53469219	PCB-1242	46	mg/kg	U
12672296	PCB-1248	46	mg/kg	U
11097691	PCB-1254	950	mg/kg	
11096825	PCB-1260	550	mg/kg	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 12

Collected: 9/1/09 **10:35:00**
Matrix: Solid
Sample Number: 09354101
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s): *2051243 Decachlorobiphenyl				NA
12674112	PCB-1016	34	mg/kg	U
11104282	PCB-1221	34	mg/kg	U
11141165	PCB-1232	68	mg/kg	U
53469219	PCB-1242	34	mg/kg	U
12672296	PCB-1248	34	mg/kg	U
11097691	PCB-1254	250	mg/kg	
11096825	PCB-1260	140	mg/kg	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: STACK - RED

Collected: 9/1/09 **10:26:00**
Matrix: Solid
Sample Number: 09354102
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s):	12674112 PCB-1016	0.46	mg/kg	U
	11104282 PCB-1221	0.46	mg/kg	U
	11141165 PCB-1232	0.92	mg/kg	U
	53469219 PCB-1242	0.46	mg/kg	U
	12672296 PCB-1248	0.46	mg/kg	U
	11097691 PCB-1254	3.8	mg/kg	
	11096825 PCB-1260	7.4	mg/kg	
Surrogate(s):	*2051243 Decachlorobiphenyl	96	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 12- BL

Collected: 9/1/09 **10:37:00**
Matrix: Solid
Sample Number: 09354103
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s): 12674112	PCB-1016	0.61	mg/kg	U
11104282	PCB-1221	0.61	mg/kg	U
11141165	PCB-1232	1.2	mg/kg	U
53469219	PCB-1242	0.61	mg/kg	U
12672296	PCB-1248	0.61	mg/kg	U
11097691	PCB-1254	11	mg/kg	
11096825	PCB-1260	8.2	mg/kg	
Surrogate(s) : *2051243	Decachlorobiphenyl	94	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 9- LR

Collected: 9/1/09 **10:45:00**
Matrix: Solid
Sample Number: 09354104
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s): *2051243 Decachlorobiphenyl				NA
12674112	PCB-1016	180	mg/kg	U
11104282	PCB-1221	180	mg/kg	U
11141165	PCB-1232	360	mg/kg	U
53469219	PCB-1242	180	mg/kg	U
12672296	PCB-1248	180	mg/kg	U
11097691	PCB-1254	7300	mg/kg	
11096825	PCB-1260	2900	mg/kg	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 8

Collected: 9/1/09 **10:50:00**
Matrix: Solid
Sample Number: 09354105
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s): *2051243 Decachlorobiphenyl				NA
12674112	PCB-1016	310	mg/kg	U
11104282	PCB-1221	310	mg/kg	U
11141165	PCB-1232	620	mg/kg	U
53469219	PCB-1242	310	mg/kg	U
12672296	PCB-1248	310	mg/kg	U
11097691	PCB-1254	8500	mg/kg	
11096825	PCB-1260	3900	mg/kg	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 5A

Collected: 9/1/09 **11:00:00**
Matrix: Solid
Sample Number: 09354106
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s): *2051243 Decachlorobiphenyl				NA
12674112	PCB-1016	46	mg/kg	U
11104282	PCB-1221	46	mg/kg	U
11141165	PCB-1232	91	mg/kg	U
53469219	PCB-1242	46	mg/kg	U
12672296	PCB-1248	46	mg/kg	U
11097691	PCB-1254	470	mg/kg	
11096825	PCB-1260	220	mg/kg	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 5A2

Collected: 9/1/09 **11:05:00**
Matrix: Solid
Sample Number: 09354107
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s):	12674112 PCB-1016	0.71	mg/kg	U
	11104282 PCB-1221	0.71	mg/kg	U
	11141165 PCB-1232	1.4	mg/kg	U
	53469219 PCB-1242	0.71	mg/kg	U
	12672296 PCB-1248	0.71	mg/kg	U
	11097691 PCB-1254	3.7	mg/kg	
	11096825 PCB-1260	2.8	mg/kg	
Surrogate(s):	*2051243 Decachlorobiphenyl	101	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Other
Sample Number: 09354107
Type: Matrix Spike

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/11/2009		
Surrogate(s) :	*2051243 Decachlorobiphenyl	97	%Rec	
	12674112 PCB-1016	63	%Rec	
	11096825 PCB-1260	88	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Other
Sample Number: 09354107
Type: Matrix Spike Dupl

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/11/2009		
Surrogate(s) :	*2051243 Decachlorobiphenyl	98	%Rec	
	12674112 PCB-1016	63	%Rec	
	11096825 PCB-1260	93	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 6

Collected: 9/1/09 **11:10:00**
Matrix: Solid
Sample Number: 09354108
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s): *2051243 Decachlorobiphenyl				NA
12674112	PCB-1016	260	mg/kg	U
11104282	PCB-1221	260	mg/kg	U
11141165	PCB-1232	520	mg/kg	U
53469219	PCB-1242	260	mg/kg	U
12672296	PCB-1248	260	mg/kg	U
11097691	PCB-1254	12000	mg/kg	
11096825	PCB-1260	6000	mg/kg	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 1

Collected: 9/1/09 11:20:00
Matrix: Solid
Sample Number: 09354109
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/11/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s):	12674112 PCB-1016	86	mg/kg	U
	11104282 PCB-1221	86	mg/kg	U
	11141165 PCB-1232	170	mg/kg	U
	53469219 PCB-1242	86	mg/kg	U
	12672296 PCB-1248	86	mg/kg	U
	11097691 PCB-1254	86	mg/kg	U
	11096825 PCB-1260	86	mg/kg	U
Surrogate(s):	*2051243 Decachlorobiphenyl	93	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 25

Collected: 9/1/09 11:35:00
Matrix: Solid
Sample Number: 09354110
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s):	12674112 PCB-1016	0.86	mg/kg	U
	11104282 PCB-1221	0.86	mg/kg	U
	11141165 PCB-1232	1.7	mg/kg	U
	53469219 PCB-1242	0.86	mg/kg	U
	12672296 PCB-1248	0.86	mg/kg	U
	11097691 PCB-1254	7.3	mg/kg	
	11096825 PCB-1260	2.3	mg/kg	
Surrogate(s):	*2051243 Decachlorobiphenyl	66	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Other
Sample Number: 09354110
Type: Duplicate

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/11/2009		
Analytes(s):	12674112 PCB-1016	0.49	mg/kg	U
	11104282 PCB-1221	0.49	mg/kg	U
	11141165 PCB-1232	1.0	mg/kg	U
	53469219 PCB-1242	0.49	mg/kg	U
	12672296 PCB-1248	0.49	mg/kg	U
	11097691 PCB-1254	8.1	mg/kg	
	11096825 PCB-1260	1.4	mg/kg	
Surrogate(s) :	*2051243 Decachlorobiphenyl	51	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: BUILDING 12- INSIDE

Collected: 9/1/09 **11:55:00**
Matrix: Solid
Sample Number: 09354111
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s):	12674112 PCB-1016	0.77	mg/kg	U
	11104282 PCB-1221	0.77	mg/kg	U
	11141165 PCB-1232	1.5	mg/kg	U
	53469219 PCB-1242	0.77	mg/kg	U
	12672296 PCB-1248	0.77	mg/kg	U
	11097691 PCB-1254	9.4	mg/kg	
	11096825 PCB-1260	6.7	mg/kg	
Surrogate(s):	*2051243 Decachlorobiphenyl	115	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description: DRUM 7/1/09

Collected: 9/1/09 **12:10:00**
Matrix: Solid
Sample Number: 09354112
Type: Reg sample

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/11/2009		
Prep Method	: 3570 SW-846 Method 3570 Micro-extraction	Prep Date : 9/9/2009		
Analytes(s): *2051243 Decachlorobiphenyl				NA
12674112	PCB-1016	490	ug/kg	U
11104282	PCB-1221	490	ug/kg	U
11141165	PCB-1232	970	ug/kg	U
53469219	PCB-1242	490	ug/kg	U
12672296	PCB-1248	490	ug/kg	U
11097691	PCB-1254	3800	ug/kg	J
11096825	PCB-1260	1700	ug/kg	J

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Solid
Sample Number: 09354112
Type: Duplicate

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : N1		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/11/2009		
Prep Method	: 3570 SW-846 Method 3570 Micro-extraction	Prep Date : 9/9/2009		
Analytes(s): *2051243 Decachlorobiphenyl				NA
12674112	PCB-1016	490	ug/kg	U
11104282	PCB-1221	490	ug/kg	U
11141165	PCB-1232	970	ug/kg	U
53469219	PCB-1242	490	ug/kg	U
12672296	PCB-1248	490	ug/kg	U
11097691	PCB-1254	12000	ug/kg	J
11096825	PCB-1260	14000	ug/kg	J

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Other
Sample Number: OBO9247B1
Type: Blank

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : 0		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/10/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s):	12674112 PCB-1016	1.0	mg/kg	U
	11104282 PCB-1221	1.0	mg/kg	U
	11141165 PCB-1232	2.0	mg/kg	U
	53469219 PCB-1242	1.0	mg/kg	U
	12672296 PCB-1248	1.0	mg/kg	U
	11097691 PCB-1254	1.0	mg/kg	U
	11096825 PCB-1260	1.0	mg/kg	U
Surrogate(s) :	*2051243 Decachlorobiphenyl	95	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Other
Sample Number: OBO9247B2
Type: Blank

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : 0		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/10/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Analytes(s):	12674112 PCB-1016	1.0	mg/kg	U
	11104282 PCB-1221	1.0	mg/kg	U
	11141165 PCB-1232	2.0	mg/kg	U
	53469219 PCB-1242	1.0	mg/kg	U
	12672296 PCB-1248	1.0	mg/kg	U
	11097691 PCB-1254	1.0	mg/kg	U
	11096825 PCB-1260	1.0	mg/kg	U
Surrogate(s) :	*2051243 Decachlorobiphenyl	96	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Other
Sample Number: OBO9247F1
Type: LCS

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : 0		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/10/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Surrogate(s) :	*2051243 Decachlorobiphenyl	97	%Rec	
	11097691 PCB-1254	76	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Other
Sample Number: OBO9247F2
Type: LCSD

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : 0		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/10/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/4/2009		
Surrogate(s) :	*2051243 Decachlorobiphenyl	101	%Rec	
	11097691 PCB-1254	79	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Solid
Sample Number: OBO9252B1
Type: Blank

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : 0		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/11/2009		
Prep Method	: 3570 SW-846 Method 3570 Micro-extraction	Prep Date : 9/9/2009		
Analytes(s):	12674112 PCB-1016	20	ug/kg	U
	11104282 PCB-1221	20	ug/kg	U
	11141165 PCB-1232	40	ug/kg	U
	53469219 PCB-1242	20	ug/kg	U
	12672296 PCB-1248	20	ug/kg	U
	11097691 PCB-1254	20	ug/kg	U
	11096825 PCB-1260	20	ug/kg	U
Surrogate(s):	*2051243 Decachlorobiphenyl	92	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Solid
Sample Number: OBO9252F1
Type: LCS

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : 0		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/11/2009		
Prep Method	: 3570 SW-846 Method 3570 Micro-extraction	Prep Date : 9/9/2009		
Surrogate(s) :	*2051243 Decachlorobiphenyl	81	%Rec	
	11097691 PCB-1254	93	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Solid
Sample Number: OBO9252F2
Type: LCSD

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : 0		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/11/2009		
Prep Method	: 3570 SW-846 Method 3570 Micro-extraction	Prep Date : 9/9/2009		
Surrogate(s) :	*2051243 Decachlorobiphenyl	83	%Rec	
	11097691 PCB-1254	94	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Other
Sample Number: OBO9254B1
Type: Blank

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : 0		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/11/2009		
Analytes(s):	12674112 PCB-1016	1.0	mg/kg	U
	11104282 PCB-1221	1.0	mg/kg	U
	11141165 PCB-1232	2.0	mg/kg	U
	53469219 PCB-1242	1.0	mg/kg	U
	12672296 PCB-1248	1.0	mg/kg	U
	11097691 PCB-1254	1.0	mg/kg	U
	11096825 PCB-1260	1.0	mg/kg	U
Surrogate(s) :	*2051243 Decachlorobiphenyl	92	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Other
Sample Number: OBO9254F1
Type: LCS

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : 0		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/11/2009		
Surrogate(s) :	*2051243 Decachlorobiphenyl	91	%Rec	
	12674112 PCB-1016	62	%Rec	
	11096825 PCB-1260	73	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-142A

Project Code: OOO-142A
Project Name: RAINIER COMMONS
Project Officer: BRUCE LONG
Account Code: 0910B10201B53C
Station Description:

Collected:
Matrix: Other
Sample Number: OBO9254F2
Type: LCSD

		Result	Units	Qlfr
ORG				
Parameter	: Polychlorinated Biphenyl	Container ID : 0		
Method	: 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC	Analysis Date : 9/14/2009		
Prep Method	: 3580A 3580A Serial Dilution	Prep Date : 9/11/2009		
Surrogate(s) :	*2051243 Decachlorobiphenyl	95	%Rec	
	12674112 PCB-1016	61	%Rec	
	11096825 PCB-1260	73	%Rec	

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description:

Description: West wall of Building 13. This is the location of Sample 09354100. This sample was collected approximately 30 feet south of the sample collected by EPA in March 2009

Time:

Direction:

Time: 10:22 am

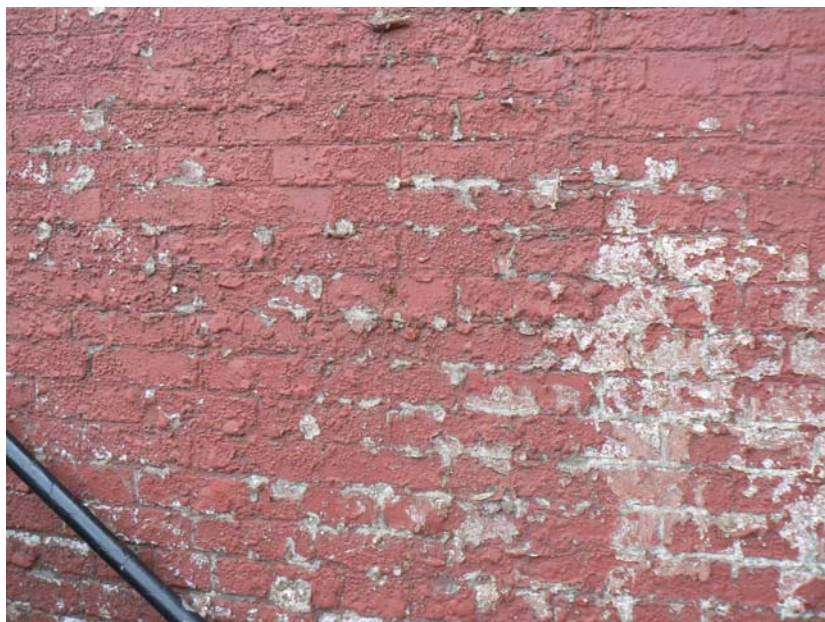
Direction: Southwest wall of Building 13.

Photo No:

Photo No: P101128

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: Flaking red paint on the lower section of the smokestack.

Time: 10:27 am

Direction: West wall of the Brick Smokestack.

Photo No: P101129



Description: Sample 09354101 was collected from the lower section of the smokestack. This sample is approximately 12 feet above street level.

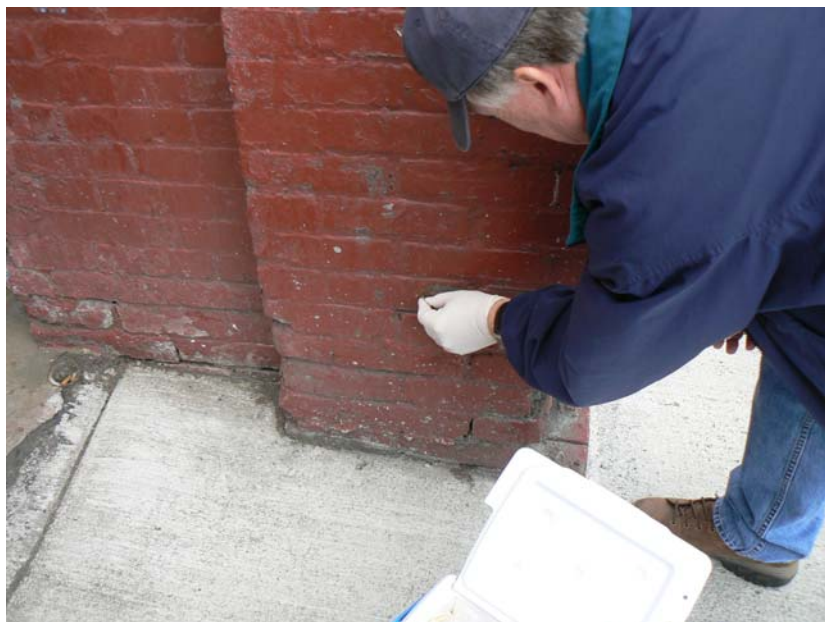
Time: 10:27 am

Direction: West wall of the Brick Smokestack.

Photo No: P101130

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: Northwest corner of Building 12. This is the location of sample 09354102. To the left is the doorway into the PCB storage for disposal unit.

Time: 10:32 am **Direction:** Northwest corner of Building 12.

Photo No: P101131



Description: : Northwest corner of Building 12. This is the location of sample 09354102.

Time: 10:32 am **Direction:** Northwest corner of Building 12.

Photo No: P101132

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: Location of sample 093541003. The paint colors under the outer coat of red vary from black to blue. The black paint is below the blue paint seen in the photograph.

Time: 10:37 am **Direction:** West wall of Building 12.

Photo No: P101135



Description: Location of sample 09354104. The under coats of paint range from orange, beige to blue.

Time: 10:41 am **Direction:** West wall of Building 9, north of loading dock.

Photo No: P101136

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: Additional view of location of sample 09354104

Time: 10:45 am **Direction:** Steps to the loading dock at Building 9.

Photo No: P101137



Description: A fallen paint chip about the size of a US Quarter.

Time: 10:45 am **Direction:** Ledge on the west wall of building 9, north of loading dock.

Photo No: P101138

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: An additional fallen paint chip about the size of a US Quarter.

Time: 10:45 am

Direction: Ledge on the west wall of building 9, north of loading dock.

Photo No: P101139



Description: Location of sample 09354105. The under coats of paint is a metal metallic in color. The concert wall is exposed here.

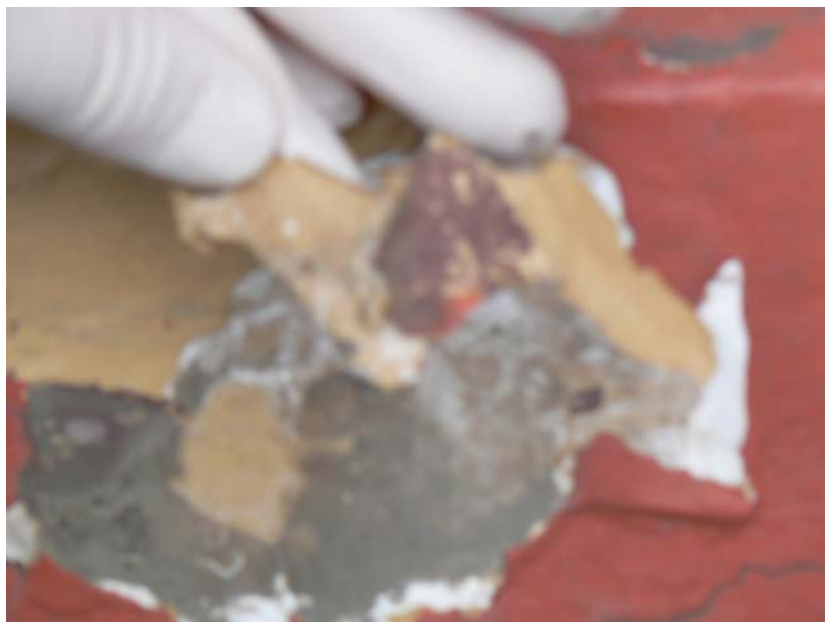
Time: 10:48 am

Direction: West wall of Building 8.

Photo No: P101140

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: Showing the older coats of paint on Building 5A.

Time: 10:58 am **Direction:** West wall of Building 5A next to Stairs.

Photo No: P101141



Description: Location of sample 09354106. The under coating are white and beige in color. The concert is exposed under the white paint.

Time: 10:59 am **Direction:** West wall of Building 5A next to Stairs.

Photo No: P101142

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: Location of sample 09354107. The rock used to build the wall near the stairs is exposed and breaks up easily when touched.

Time: 11:03 am **Direction:** West wall of Building 5A, next to stairs.

Photo No: P101143



Description: Location of sample 09354107. The rock used to build the wall near the stairs is exposed and breaks up easily when touched.

Time: 11:04 am **Direction:** West wall of Building 5A, next to stairs.

Photo No: P101144

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: Location of sample 09354108. This is the west wall of Building 6, just north of the entry door (See 101146).

Time: 11:08 am **Direction:** West wall of Building 6

Photo No: P101145



Description: Paint chips on the walkway leading to the door were combined with the flake paint sample taken from the location see in Photograph 101145.

Time: 11:11 am **Direction:** West wall of Building 6.

Photo No: P101146

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: The catch basins in the ally behind Building 13 did not have a sufficient amount of debris for collecting. This is the same catch basin EPA sampled in March 2009.

Time: 11:13 am **Direction:** Catch basin between Buildings 3 and 13.

Photo No: P101147



Description: Close-up of the new sock inside the catch basin.

Time: 11:13 am **Direction:** Catch basin between Buildings 3 and 13.

Photo No: P101149

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: The coats of paint are brown over black and tan or beige. This is the location of sample 09354109.

Time: 11:18 am **Direction:** Building 1, west wall, north of entry.

Photo No: P101150



Description: The coats of paint are brown over black and tan or beige.

Time: 11:18 am **Direction:** Building 1, west wall, north of entry.

Photo No: P101151

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: Paint chips on the edge of catch basin on the east road behind building 1. The paint is a tan or darker beige. The color of the paint chip is similar to the beige seen on Buildings 1 and 3.

Time: 11:22 am **Direction:** East road between the Freeway and Building 1.

Photo No: P101152



Description: This is a close-up of the sock and catch basin on the west side of Building 1. This is rainwater from earlier today. There was no debris in the sock.

Time: 11:22 am **Direction:** East road between the Freeway and Building 1.

Photo No: P101153

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: Catch basin east of Building 4. There is a little debris in the sock, but no paint chips are seen. The catch basin is up-hill from the Rainier Commons Building 4.

Time: 11:26 am **Direction:** East of Building 4, in the road between the I-5 Freeway and Building 4.

Photo No: P101156



Description: Location of sample 09354110. This sample of paint was not covered by paint that had been applied after Rainier Commons, LLC purchased the property. The paint sample is two colors of beige.

Time: 11:32 am **Direction:** East wall of Building 25.

Photo No: P101157

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: ?

Time: 11:51 am **Direction:** Inside Building 12, north wall.

Photo No: P101158



Description: Location of sample 09354111. The paint is white and the under coats are also white.

Time: 11:54 am **Direction:** Inside Building 12, north wall.

Photo No: P101159

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: A little cove on the north wall of Building 12. All of the containers with debris picked up around the Old Brewery is marked with a date.

Time: 11:56 am

Direction: Inside Building 12, ground floor, north wall.

Photo No: P101160



Description: The date on the containers is the starting date employees used to store contaminated debris that contains paint chips cleaned up around the Old Brewery.

Time: 11:56 am

Direction: Inside Building 12, ground floor, north wall.

Photo No: P101161

PHOTO DOCUMENTATION

Facility: Rainier Commons, LLC	Lat/Long: 47.576224/-122.321200	Inspection Date: September 1, 2009
Location: Seattle, Washington 98134	Camera: Panasonic/Lumix DMC-FZ7	Photographer: Tristen Gardner



Description: Brooms and rakes used to clean up paint chips at the Rainier Commons.

Time: 11:56 am **Direction:** West wall of Building 12.

Photo No: P101162



Description: Material inside the drum with the out of service date of 07/1/09. This is also the location of sample 09354112.

Time: 12:05 pm **Direction:** Contents in Drum 07/1/09, north wall inside Building 12.

Photo No: P101164